

## CLAIMS

1. A positive electrode active material for non-aqueous electrolyte secondary battery which comprises a composite oxide containing mainly iron and sodium, having a hexagonal crystal structure, and exhibiting a value of 2 or less obtained by dividing the XRD peak intensity corresponding to an interplanar spacing of 2.20 Å by the XRD peak intensity corresponding to an interplanar spacing of 5.36 Å.
2. A positive electrode active material according to claim 1, wherein the composite oxide is represented by the formula  $\text{NaFe}_{1-x}\text{M}_x\text{O}_2$  (where M is at least one element selected from the group consisting of trivalent metals, and x satisfies  $0 \leq x < 0.5$ ).
3. A method for producing a positive electrode active material for non-aqueous electrolyte secondary battery which comprises heating a metal compound mixture containing mainly a sodium compound and an iron compound at a temperature in the range from 400°C to 900°C to produce a composite oxide containing mainly a sodium compound and an iron compound, wherein the mixture is heated in an inert atmosphere in the temperature range of lower than 100°C in the course of rising of the temperature.
4. A non-aqueous electrolyte sodium secondary battery using the positive electrode active material for non-aqueous electrolyte secondary battery according to claim 1 or 2.